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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,378	04/16/2004	Arja Miettinen-Oinonen	1716.0510009	8318

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EXAMINER

PATTERSON, CHARLES L JR

ART UNIT PAPER NUMBER

1652

DATE MAILED: 11/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/825,378

**Applicant(s)**

MIETTINEN-OINONEN ET AL.

**Examiner**

Charles L. Patterson, Jr.

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 31-101 and 154-180 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) See Continuation Sheet is/are rejected.
- 7) ☒ Claim(s) See Continuation Sheet is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Continuation of Disposition of Claims: Claims rejected are 31,33,36,38,40-49,51,54,56,58-68,70,73,75,77-85,87,90,92,94-101,154,155,157,158,160,161,163,164,166,167,169,170,172,173,175,176 and 178-180.

Continuation of Disposition of Claims: Claims objected to are 32,34,35,37,39,50, 52-53,55,57,69,71,72,74,76,86,88,89,91,93,156,159,162,165,168,171,174 and 177.

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After further consideration the previous 35 USC § 101 rejection and corresponding 35 USC § 112 first paragraph rejection is dropped.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 31, 33, 36, 38, 40-49, 51, 54, 56, 58-68, 70, 73, 75, 77-85, 87, 90, 92, 94-101, 154-155, 157-158, 160-161, 163-164, 166-167, 169-170, 172-173, 175-176 and 178-180 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. This rejection is repeated for the reasons given in the last action. Applicants arguments have been carefully considered but do not overcome the instant rejection.

Applicants argue in response to the 35 USC § 101 rejection, and incorporate that argument into their argument concerning this rejection, that "the examiner did not clearly and properly set forth his reasoning in concluding that a polypeptide with %80 identity to SEQ ID NO:31 or residues 22-235 of SEQ ID NO:31 has no specific and substantial asserted utility or a well established utility". They then argue that the claims are drawn to "any equivalent polypeptide or nucleic acid sequence having 80% identity and having cellulase activity" (emphasis in original) and that the specification teaches the use of "equivalent" proteins having %80-%99 identity and functional equivalents of a 20K cellulase and "teaches a number of specific and substantial

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utilities... including their use in the textile, detergent, and pulp and paper industries". It is then argued that "the present examiner previously allowed claims in a related application directed to polypeptides having 80% identity to SEQ ID NO:31" in U.S. Patent 6,723,549 and the instant claims "should be allowed for the sake of consistency.

This is not found persuasive because, even though the specification teaches possible uses for enzymes with %80 identity, it is well known that the change of even one amino acid in a protein can change the activity of the protein. Also, the specification does not teach what regions of the protein are binding regions, catalytic regions, etc. and what regions can be changed without affecting activity. Therefore the specification does not specifically teach what specific residues can be changed to what and still have activity retained. What was done in the prosecution of one application has no bearing upon the prosecution of another application.

In response to this rejection, applicants argue that "the specification explicitly teaches that enzymes comprising polypeptides that are 80% identical with SEQ ID NO:31 or residues 22-235 of that sequence are functional equivalent amino acid sequences of" these sequences, and "defines the biological activity of a cellulase as its catalytic activity and/or ability to bind cellulosic material...[and thus] clearly identifies the characteristics of a polypeptide sequence that is 80% identical" to these sequences. As discussed *supra*, the specification does not teach what specific residues can be replaced with what residues and have activity retained. It is well known that a change of just one amino acid can change the activity of an enzyme. It is maintained that without such guidance, undue experimentation would be required to practice the invention within the metes and bounds of the instant

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claims. As stated previously, in order to allow for allelic variants the examiner will allow claims drawn to 95% identity to SEQ ID NO:30 or 31.

After careful consideration of applicant's Remarks and re-consideration of the Veumaanpera declaration and the MPsrch documentation in the parent application (08/841,636), it is agreed to drop the previous 35 USC § 102 rejection. This is with the understanding that percentage identity is defined in the instant claims as being indicative of identical amino acids residues in both sequences, not taking into account conservative changes or gaps.

Claims 32, 34-35, 37, 39, 50, 52-53, 55, 57, 69, 71-72, 74, 76, 86, 88-89, 91, 93, 156, 159, 162, 165, 168, 171, 174 and 177 are objected to as being dependent upon a rejected base claim.

Because some of the claims were omitted from the rejection in the previous action, this action is being made non-final.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles L. Patterson, Jr., PhD, whose telephone number is 571-272-0936. The examiner can normally be reached on Monday - Friday from 7:30 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapura Achutamurthy, can be reached on 571-272-0928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status informa-

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tion for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Charles B. Patterson, Jr.  
Primary Examiner  
Art Unit 1652

Patterson  
November 20, 2006